

IC. AMENDMENTS TO THE CLAIMS

Cancel claims 12-17 without prejudice to renewal.

Please enter the amendments to claims 2, 4, and 7, as shown below.

Please enter new claims 19 and 20, as shown below.

1. (Previously presented) An isolated nucleic acid encoding a mammalian leucine-rich repeat-containing G-protein coupled receptor 7 (LGR7) protein, wherein the LGR7 protein comprises an amino acid sequence having at least 80% amino acid sequence identity to the sequence set forth in SEQ ID NO:08.

2. (Currently amended) An isolated nucleic acid according to Claim 1, wherein said mammalian protein has the amino acid sequence of ~~SEQ ID NO:06 or~~ SEQ ID NO:08.

3. (Canceled)

4. (Currently amended) An isolated nucleic acid according to Claim 1, wherein the nucleotide sequence of said nucleic acid has the sequence ~~set forth in SEQ ID NO:05 or the complementary sequence thereof or the sequence~~ set forth in SEQ ID NO:07 or the complementary sequence thereof.

5.-6. (Canceled)

7. (Currently amended) An isolated nucleic acid that hybridizes under stringent conditions at 50°C or higher in a solution of 15 mM sodium chloride, 1.5 mM sodium citrate to a nucleic acid having the nucleotide sequence ~~set forth in SEQ ID NO:05 or the complementary sequence thereof or the sequence~~ set forth in SEQ ID NO:07 or the complete complementary sequence thereof.

8. (Original) An expression cassette comprising a transcriptional initiation region functional in an expression host, a nucleic acid having a sequence of the isolated nucleic acid according to Claim 1 under the transcriptional regulation of said transcriptional initiation region, and a transcriptional

termination region functional in said expression host.

9. (Original) A cell comprising an expression cassette according to Claim 8 as part of an extrachromosomal element or integrated into the genome of a host cell as a result of introduction of said expression cassette into said host cell, and the cellular progeny of said host cell.

10. (Previously presented) A method for producing a mammalian leucine-rich repeat-containing G-protein coupled receptor 7 (LGR7) protein, wherein the LGR7 protein comprises an amino acid sequence having at least 80% amino acid sequence identity to the sequence set forth in SEQ ID NO:08, said method comprising:

growing a cell according to Claim 9, whereby said mammalian protein is expressed; and
isolating said protein substantially free of other proteins.

11. (Previously presented) A purified polypeptide composition comprising a mammalian leucine-rich repeat-containing G-protein coupled receptor 7 (LGR7) protein or a fragment thereof, wherein the LGR7 protein is at least about 80% pure, and wherein the LGR7 protein comprises an amino acid sequence having at least 80% amino acid sequence identity to the sequence set forth in SEQ ID NO:08.

12. -17. (Cancelled)

18. (Previously presented) A method of screening a sample for the presence of a ligand for leucine-rich repeat-containing G-protein coupled receptor 7 (LGR7) receptor, said method comprising:

contacting said sample with an LGR7 receptor, wherein the LGR7 receptor comprises an amino acid sequence having at least 80% amino acid sequence identity to the sequence set forth in SEQ ID NO:08, and

detecting the presence of binding between said receptor and ligand in said sample.

19. (New) The nucleic acid of claim 1, wherein said LGR7 protein comprises an amino acid sequence having at least about 90% amino acid sequence identity to the sequence set forth in SEQ ID NO:08.

20. (New) The nucleic acid of claim 1, wherein said LGR7 protein binds a hormone.